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Application Number

09/649,974

Filing Date

8/29/00

First Named Inventor

Buffalo

Art Unit

2154

Examiner Name

Philip C. Lee

Attorney Docket Number

1999-0699

Total Number of Pages in This Submission

ENCLOSURES (Check all that apply)

Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)

Response to Missing Parts/
Incomplete ApplicationResponse to Missing Parts
under 37 CFR 1.52 or 1.53

Drawing(s)



Licensing-related Papers



Petition

Petition to Convert to a
Provisional ApplicationPower of Attorney, Revocation
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Remarks

After Allowance communication
to Technology Center (TC)Appeal Communication to Board
of Appeals and InterferencesAppeal Communication to TC
(Appeal Notice, Brief, Reply Brief)

Proprietary Information



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Wendy W. Koba

Signature

Wendy W. Koba

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Patent Application for:

Applicants: Clarence Buffalo et al.

Atty. No: 1999-0699

Title: Customer Service Maintenance Automation

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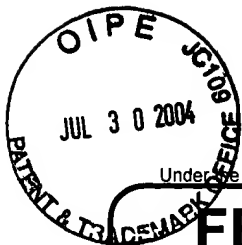
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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**330.00**

Complete if Known

Application Number **09/049,974**
Filing Date **8/29/00**
First Named Inventor **Buffalo**
Examiner Name **Philip C. Lee**
Art Unit **2154**
Attorney Docket No. **1999-0699**

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account:

Deposit Account Number
Deposit Account Name

The Director is authorized to: (check all that apply)

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)					(\$) 0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims - 20** = X =
Independent Claims - 3** = X =
Multiple Dependent =

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	** Reissue independent claims over original patent	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)					(\$) 0

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	330
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)**330.00**

SUBMITTED BY

Name (Print/Type) **Wendy W. Koba** Registration No. **30509** Telephone **610-346-7112**
Signature **Wendy W. Koba** (Attorney/Agent) Date **7/30/04**

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Buffalo 1999-0699

**IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE**

Patent Application

Inventor(s) Clarence W. Buffalo et al.

Case 1999-0699

Conf. No. 9167

Serial No. 09/649,974

Group Art 2154

Filing Date August 29, 2000

Examiner Phillip C. Lee

Title Customer Service Maintenance Automation

**COMMISSIONER FOR PATENTS
ALEXANDRIA, VA 22313-1450**

SIR:

BRIEF ON APPEAL

I. INTRODUCTION

Appellants submit the foregoing brief pursuant to a Notice of Appeal filed June 4, 2004, from a decision of the Examiner dated March 11, 2004, issuing a final rejection of all pending claims 1-17 and 19-29 of the above-identified application.

II. REAL PARTY IN INTEREST

AT&T Corp. is the real party in interest by virtue of an Assignment recorded in the United States Patent and Trademark Office on October 10, 2000.

08/04/2004 AWONDAF1 00000068 09649974

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330.00 0P

III. RELATED APPEALS AND INTERFERENCES

This is the first appeal in the above-identified application.

IV. STATUS OF CLAIMS

The present application contains claims 1-7, 15-17 and 19-29, claim 18 having been previously cancelled and claims 8-14 being cancelled in the Appeal. The remaining pending claims are under a “final” rejection by the Examiner. The attached Appendix A contains a complete, clean copy of the claims now pending in the application.

Appellants hereby appeal the Final Rejection by the Examiner of remaining claims 1-7, 15-17 and 19-29.

V. STATUS OF AMENDMENTS

Appellants’ amendment to the pending claims dated January 27, 2004 has been entered, but was not found by the Examiner to place the case in condition for allowance.

VI. SUMMARY OF THE INVENTION

Appellants’ invention, as discussed in the specification at page 2, beginning at line 5, “provides a customer maintenance system for automatically providing infrastructure maintenance in response to a customer form/report/ticket in a communications network that includes a core communications service and an access provider service. The system includes a Work-Flow Manager that is arranged to trigger, for each customer form/report/ticket, each of a plurality of automatic software programs in response to an associated milestone event for the customer form/report ticket and a Maintenance Program Scheduler that is coupled to the Work-Flow Manager and is used for invoking at least one predetermined maintenance software program/engine based upon predetermined criteria being met by the form/report/ticket”. As further described at page 5, beginning at line 1, “[t]he present invention may be implemented as a method for automatically providing infrastructure maintenance in response to a customer form/report/ticket in a communications network that includes a voice and data service. The method includes the steps of: generating a ticket/customer repair request regarding a problem; diagnosing the problem; testing to determine whether the problem has been

fixed; generating clearance and analysis codes; notifying the customer that the system has repaired the problem; and closing out the ticket/repair upon successful repair of the problem”. In particular, “[d]iagnosing the problem is generally accomplished by an automatic diagnosing program and an automatic linking program”.

VII. GROUPING OF CLAIMS

For the purposes of this appeal, claims 1, 3-5 and 7 stand or fall together, and claims 2 and 6 stand or fall together, claims 15-17 and 19-25 stand or fall together, and claims 26-29 stand or fall together.

IX. ARGUMENT

A. 35 USC § 103(a) Rejection - Claims 1, 3-5 and 7

In the Office action dated March 11, 2004 (application Paper No. 8), the Examiner issued a Final rejection of the cited claims under 35 USC 103(a) as being unpatentable over US Patent 6,445,774 (Kidder et al., of record), in view of US Patent 6,032,184 (Cogger, also of record). The Examiner cited Kidder et al. as teaching “a Work-Flow manager, arranged to automatically trigger, for each customer form/report/ticket, at least one automatic diagnosis program from a plurality of automatic diagnosis software programs without human intervention” and “a Maintenance Program Scheduler, coupled to the Work-Flow Manager, for invoking at least one predetermined maintenance software program based upon predetermined criteria being met by the form/report/ticket, and the results of the at least one automatic diagnosis software program, without human intervention”. The Examiner stated that Kidder et al. lacked any teaching regarding an Access Provider, and thus cited Cogger as teaching “providing infrastructure maintenance response to a customer form/report/ticket in a communications network that includes an Access Provider services” and concluded that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kidder and Cogger because Cogger’s method of providing Access Provider services would enhance the attractiveness of Kidder’s

automatic customer maintenance system by providing an all inclusive service require contact point”.

In response, appellants assert that the cited Kidder reference does not disclose or suggest any system wherein a “Work-Flow Manager” is configured to “automatically trigger ...*at least one automatic diagnosis software program*” and a “Maintenance Program Scheduler” is configured to invoke “at least one predetermined maintenance software program”, as defined by rejected independent claim 1. The Kidder system is associated with the “automatic workflow” of trouble tickets in a communication network, and is “automated” in terms of always knowing/monitoring the status of each trouble ticket. No analysis, “diagnosis” or “maintenance” is actually performed by the Kidder system. No system element is “triggered”, for each trouble ticket, to perform “at least one automatic diagnosis software program”. The various portions of Kidder cited by the Examiner define and describe the flow of the actual trouble ticket from its initial creation to its resolution. Thus, it is asserted that the Kidder function of overseeing the progress of a trouble ticket through a network maintenance system could be used in conjunction with appellants’ inventive system for providing “automated maintenance”, as defined by rejected claims 1, 3-5 and 7.

The cited Cogger reference does disclose a system that allows for a customer to submit a “trouble ticket” to a network management agent, regardless of whether of the trouble is associated with the access provider’s network/equipment, or a “long-distance telephone company’s” network/equipment. However, as with the cited Kidder reference, the Cogger system is associated with “tracking the life cycle of the trouble ticket” (column 16, line 55). There is no disclosure in Cogger regarding the automation of the actual “diagnosis” and “maintenance” efforts, which is precisely the subject matter of rejected claims 1, 3-5 and 7.

Based on these significant differences, therefore, appellants remain convinced that the combination of Kidder and Cogger cannot be found to render obvious the subject matter of the present invention as defined by claims 1, 305 and 7. Appellants therefore respectfully request the Board of Appeals to reconsider these arguments, reverse the Examiner’s rejection and find claims 1, 3-5 and 7 to be in condition for allowance.

B. 35 USC § 103(a) Rejection - Claims 2, 6, 8-17 and 19-29

1. Claims 2 and 6

The Examiner issued a Final Rejection of the above-cited claims under 35 USC 103(a) as being unpatentable over Kidder and Cogger (as above), in view of US Patent 5,946,372 (Jones, of record).

Regarding claim 2, the Examiner cited Kidder as teaching “an automatic linking program for automatically linking the customer with an area to solve a problem”, referred to column 8, lines 26-49 of Kidder. That portion of the Kidder reference includes a description of a “live” network monitor technician that contacts “the on-site personnel and apprises them of the anomaly. In some instances, the on-site personnel can resolve the anomaly and terminate the alarm generated by the telecommunications network”. There is no discussion or description in this portion of Kidder regarding “automatically linking the customer with an area to solve a problem”. The Jones reference is then cited by the Examiner as teaching “an automatic diagnosing program for providing automatic diagnosis”, as further defined in claim 2. In response, appellants assert that Jones is not directed to any system/method for “diagnosing” alarms/troubles in a communication network. Rather, Jones is directed to implementing a standard script of “tests” to a new installation (primarily associated with digital installations) to check for bugs/errors in the system prior to turning up the system for the customer. In particular, a pre-defined set of tests are run on the line to determine line quality, bit error rate, etc. There is no “analysis” of a trouble and a selection of a “diagnosis software program” to utilize with the trouble to ascertain the best maintenance program to employ, where this is the subject matter of the present invention as defined by claim 2. Moreover, there remains no teaching of “diagnosing” a network problem, as defined by the system of claim 1, from which claim 2 depends.

Regarding claim 6, the Examiner further cited Jones as teaching the use of a “Test Unit for testing a selected infrastructure portion of the communications network”. While this may be true, the combination of Jones with Kidder and Cogger still does not disclose or suggest any system for providing “automatic diagnosis”, followed by “maintenance”

software to correct the problem, as defined by independent claim 1, from which claim 6 depends.

For all of the above reasons, therefore, appellants respectfully request the Board of Appeals to reconsider these arguments, reverse the Examiner's finding and instead find claims 2 and 6 to be in condition for allowance.

2. Claims 8-14

Inasmuch as claims 8-14 have been cancelled from this application, there is no longer a need to respond to the Examiner's grounds for rejection.

3. Claims 15-17, 19-25

In the rejection of claims 15-17 and 19-25, the Examiner cited Jones as teaching the particular method step of "diagnosing the problem by using an automatic diagnosing program". As discussed above, Jones discloses a system/method for providing initial testing of a network element or line. Various tests include, but are not limited to, bit error rate, signal-to-noise ratio, etc. The tests are performed without any *a priori* knowledge of the line being tests. Therefore, these tests cannot be considered as used to "diagnosis" an existing problem. In contrast, a standard, conventional set of tests are performed to determine the "health" of the line. Thus, appellants assert that there is no teaching in Jones (or in Kidder or Cogger) regarding the method step of "diagnosing the problem by using an automatic diagnosing program and using an automatic linking program for automatically linking the customer with an area to solve a problem" as defined by independent claim 15. Without this teaching, appellants assert that independent claim 15, as well as remaining dependent claims 16, 17 and 19-25 cannot be found to be rendered obvious by the combination of Jones with Kidder and Cogger.

Appellants thus respectfully request the Board of Appeals to reconsider the Examiner's Final Rejection in light of these assertions, reverse this Final Rejection and find claims 15-17 and 19-25 to be in condition for allowance.

4. Claims 26-29

Regarding the Examiner's rejection of independent claim 26, the Examiner cited Jones as teaching "sending ... a message requesting verification that the problem has been fixed", and "testing and performing alarm checks to determine if the circuit problem has been repaired". While this may be true, appellants assert that Jones does not disclose or suggest any step of "diagnosing the circuit problem" in the first instance, as required by rejected claim 26. As described above, Jones is directed to running a series of tests for a new circuit to determine the quality of the circuit before being used by a customer. There is no "trouble ticket" issued by a customer and responded to with a diagnosis in Jones (or in Cogger or Kidder).

Based on this lack of teaching, appellants assert that the combination of Jones with Kidder and Cogger cannot be found to render obvious the subject matter of the present invention as defined by independent claim 26, or claims 27-29 which depend therefrom. Appellants therefore respectfully request the Board of Appeals to review these assertions, reverse the Examiner's rejection and find claims 26-29 to be in condition for allowance.

X. CONCLUSION

For the reasons expressed above, the Examiner's rejections of claims 1-7, 15-17 and 19-29 under 35 USC § 103(a) are considered to lack merit and thus mandate reversal. Appellants solicit such action from the Board of Appeals at this time.

Respectfully submitted,

Clarence W. Buffalo et al.

By: Wendy W. Koba

Wendy W. Koba
Attorney for appellants
Reg. No 30509
610-346-7112

Date: 7/30/04

Appendix A - Pending Claims for Application No. 09/649,974

1. *(previously presented)* An automatic customer maintenance system for automatically providing infrastructure maintenance in response to a customer form/report/ticket in a communications network that includes a core communications service and an Access Provider service, comprising:

a Work-Flow Manager, arranged to automatically trigger, for each customer form/report/ticket, at least one automatic diagnosis software program from a plurality of automatic diagnosis software programs without human intervention; and

a Maintenance Program Scheduler, coupled to the Work-Flow Manager, for invoking at least one predetermined maintenance software program based upon predetermined criteria being met by the form/report/ticket, and the results of the at least one automatic diagnosis software program, without human intervention.

2. *(previously presented)* The automatic customer maintenance system of claim 1 wherein the plurality of automatic diagnosis software programs include:

an automatic diagnosing program for providing automatic diagnosis;

an automatic linking program for automatically linking the customer with an area to solve a problem;

an automatic notification program for automatically notifying a maintenance technician when the problem requires further analysis;

an automatic referral program for automatically referring the problem to the Access Provider service via a first gateway;

an automatic preparation for clearance program for automatically populating clearance information and analysis codes on the ticket based on a diagnosis conclusion sent by the Access Provider service;

an automatic progress reporting program for automatically verifying if the problem has been fixed;

an automatic customer notification program for automatically conveying clearance information for the customer; and

an automatic closing program for automatically checking for tickets that have been conveyed to the customer.

3. *(previously presented)* The automatic customer maintenance system of claim 1 wherein the at least one predetermined maintenance software program for the maintenance program scheduler include:

- an automatic process reporting program; and
- an automatic closing program.

4. *(previously presented)* The automatic customer maintenance system of claim 1 wherein the Access Provider service is implemented using a second gateway for access that is coupled to a data communication network of the communications network.

5. *(previously presented)* The automatic customer maintenance system of claim 1 wherein the customer form/report/ticket is initiated by an agent in a Customer Care Platform that is coupled to a data communication network that delivers the customer form/report/ticket to a Business Maintenance Platform for processing without human intervention in accordance with at least the automatic software programs.

6. *(original)* The automatic customer maintenance system of claim 5 wherein the Business Maintenance Platform includes:

- a Database for storing circuit and customer information;
- a Ticket Unit for processing the customer form/report/ticket;
- a Test Unit for testing a selected infrastructure portion of the communications network;
- an Alarm Unit for recording problems that the system detects in the network; and
- an Event Unit having a Work-Flow Manager and a plurality of computer programs/engines, wherein the Event Unit is used for monitoring events and initiating activities based on events.

7. *(original)* The automatic customer maintenance system of claim 1 wherein the Business Maintenance Platform is coupled in parallel to a Data Communication Network, Service Provisioning System, a Work Management System, Network Management Systems, a Billing System and a Gateway.

8. - 14. *cancelled*

15. *(previously presented)* A method for automatically providing, without human intervention, infrastructure maintenance in response to a customer form/report/ticket in a communication network that includes a core communications service and an Access Provider service, comprising the steps of:

generating a ticket/customer repair request regarding a problem;

diagnosing the problem by using an automatic diagnosing program and using an automatic linking program for automatically linking the customer with an area to solve a problem;

testing to determine whether the problem has been fixed;

generating clearance and analysis codes;

notifying the customer that the system has repaired the problem; and

closing out the ticket/repair request upon successful repair of the problem.

16. *(original)* The method of claim 15 wherein generating a ticket/customer repair request regarding a problem is accomplished by a customer and the ticket is transmitted to a Business Maintenance Platform for automatic infrastructure maintenance processing.

17. *(original)* The method of claim 15 wherein generating a ticket/customer repair request regarding a problem is accomplished by an agent of a Customer Care Platform and transmitted to a Business Maintenance Platform for automatic infrastructure maintenance processing.

18. *cancelled*

19. *(original)* The method of claim 15 wherein testing to determine whether the problem has been fixed is accomplished by an automatic verification program for automatically verifying if the problem has been fixed.

20. *(previously presented)* The method of claim 15 wherein generating clearance and analysis codes is accomplished by an automatic preparation for clearance program for automatically populating clearance information and analysis codes on the ticket based on a diagnosis conclusion sent by the Access Provider service.

21. *(previously presented)* The method of claim 15 wherein notifying the customer that the system has repaired the problem is accomplished by an automatic customer notification program for automatically conveying clearance information for the customer that displays a circuit trouble description to the customer via e-maintenance, a web-based system that provides customers direct access to view/update their trouble ticket, and by an Interactive Voice Response system.

22. *(original)* The method of claim 15 wherein closing out the ticket/repair request upon successful repair of the problem is accomplished by an automatic closing program for automatically checking for tickets that have been conveyed to the customer.

23. *(previously presented)* The method of claim 15 wherein an automatic notification program for automatically notifying a maintenance technician when the problem requires further analysis is utilized when a trouble ticket is sent to a maintenance technician as soon as the problem is diagnosed as a telephone service/core communications service problem requiring manual intervention.

24. *(original)* The method of claim 15 wherein an automatic progress reporting program for automatically determining when a status is owed to the customer is utilized to implement an Interactive Voice Response system that automatically phones the customer periodically and informs him/her/an answering machine of the current status of his/her ticket.

25. *(original)* The method of claim 15 wherein an automatic verification program for automatically verifying if the problem has been fixed is utilized to run tests and perform alarm checks to determined if an Access Provider has fixed the problem.

26. *(previously presented)* A method for automatically providing infrastructure maintenance in response to a customer form/report/ticket in a communications network that includes a core communications service and an Access Provider service, comprising the steps of utilizing, without human intervention, software programs for automatically:

preparing, by one of a customer and an agent, a customer form/report/ticket concerning a circuit problem and sending the customer form/report/ticket to a Business Maintenance Platform;

determining whether the circuit problem reported has been caused by a higher level facility/equipment, automatically preparing a second ticket for the higher level facility/equipment and correlating the customer form/report/ticket and the second ticket with respect to updates;

diagnosing the circuit problem and, where the circuit problem has been fixed, initiating clearing of the ticket, and where the problem exists in the Access Provider's portion of the circuit, automatically sending an electronic referral to an Access Provider, and determining that manual intervention by a maintenance technician is needed, sending an electronic message to the maintenance technician alerting the maintenance technician to the need for repair;

sending, upon the Access Provider's/the maintenance technician's completion of the repair, a message requesting verification that the problem has been fixed;

testing and performing alarm checks to determine if the circuit problem has been repaired;

when the circuit problem has been repaired, re-populating clearance information and analysis codes on the customer form/report/ticket to indicate that the circuit problem has been repaired;

providing an update to the customer, by one of an interactive voice response system and an email, indicating that the problem is fixed; and

when the customer confirms that the circuit problem is fixed, closing out the ticket.

27. *(previously presented)* The method of claim 26 wherein, following clearing, alternatively, an email (EM) is sent automatically to update the customer; and when the customer indicates that the problem is fixed, automatically closing out the customer form/report/ticket.

28. *(previously presented)* The method of claim 26 including automatically sending an electronic message to the Access Provider to indicate that the public switched network service accepts closure after verification that the circuit is working correctly.

29. *(previously presented)* The method of claim 26 including automatically reporting upon one of the following: a predetermined time having elapsed, an initiation by the automatic referral, an initiation by the automatic notification, and an indication that a report on progress due is needed.